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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/763,027

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EXAMINER

MERKLING, MATTHEW J

ART UNIT

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1795

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DELIVERY MODE

05/05/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/763,027	Applicant(s) MAUS, WOLFGANG	
	Examiner MATTHEW J. MERKLING	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/13/09 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-4, 6, and 8-27 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 2 includes a limitation which states "...preventing the average initial diameter of said matrix from decreasing by more than 5% during and/or after a thermal stress of 1090 C". As originally filed, the disclosure does not include any thermal stresses of 1090 C. Furthermore, in the remarks submitted by Applicant on 3/13/09, there are several references to a thermal stress of 1900 C. However, 1900 C is not disclosed in the originally filed disclosure.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-4, 6 and 8-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Ota et al. (US 5,486,338).

Regarding claims 1, 9, 11, 16, and 25-27, Ota discloses a honeycomb body comprising:

a housing (2);

a matrix (corrugated foils (8) and flat sheets (7), inside housing) having a diameter and connected to said housing (see Figs. 1, 2, 3, 5, 6); and

at least one contraction limiter (5, 9a, 9b, 10, 11) causing an outwardly directed tensile stress in at least one part of said matrix (see Figs. 1, 2, 3, 5, 6) for preventing the average initial diameter of said matrix from decreasing by more than 5% during and/or after a thermal stress of 1090C (when heated, the matrix of Ota will inherently expand, therefore, the matrix will decrease by less than 5%).

Regarding claim 2, Ota, as discussed in claim 1 above, further discloses said matrix (8,7) is connected to said housing (3) by said contraction limiter (cushion member (5) and joints (9a)).

Regarding claim 3, Ota, as discussed in claim 1 above, further discloses said contraction limiter (11) has a first end region (11b) connected to said matrix (see Fig. 11) resulting in a connecting region, and a second end region (11a) connected to said housing (2, see Fig. 11) resulting in a fastening region).

Regarding claim 4, Ota, as discussed in claim 1 above, further discloses said contraction limiter (11) and said matrix (3) have a common connecting region (11b, see Fig. 11); and

said matrix (3) has walls (7) connected to one another by joining connections (corrugated foil (8)), the tensile stress being applied through said common connecting region.

Regarding claim 8, Ota, as discussed in claim 1 above, further discloses:

said matrix (3) has a circumference (see Fig. 2); and

said contraction limiter (5, 6 in Fig. 1) is one of a plurality of contraction limiters (see Fig. 10) disposed axially one behind another (see Fig. 1), with an offset with respect to one another in a direction of said circumference of said matrix (see Fig. 11).

Regarding claim 10, Ota, as discussed in claim 1 above, further discloses said matrix is thermally insulated with respect to said housing (via gap between the two structures, see Fig. 2).

Regarding claims 12 and 20, Ota, as discussed in claim 1 above, further discloses said matrix (3) has walls formed of at least partially structured sheet-metal foils (metal honeycomb, see abstract) stacked and/or coiled forming channels through which a gas can flow (honeycomb, see Fig. 3).

Regarding claims 6 and 21-23 Ota, as discussed in claim 1 above, further discloses said contraction limiter (cushion sections 11) and said matrix (3) have a common connecting region (11b), said common connecting region is disposed close to an end side of said matrix (Ota discloses said cushion sections and joining sections are provided over the entire axial length i.e. up to the edge of said matrix, as pictured in Figs. 7 and 8, see col. 5 lines 40-44).

Regarding claim 13, Ota, as discussed in claim 12 above, further discloses said matrix (3) is at least partially surrounded by an outer structured foil (foil (7) see Fig. 2).

Regarding claim 14, Ota, as discussed in claim 12 above, further discloses said sheet-metal foils have a thickness of less than 0.06 mm (.05mm, col. 5 line 50-52).

Regarding claims 17 and 24, Ota, as discussed in claim 1 above, further discloses said contraction limiter (10) has means for preventing crack propagation (see corrugated limiters in Fig. 3 which will expand without cracking).

Regarding claims 15, 18 and 19, while Ota, as set forth in claim 12 above doesn't teach the thickness of the sheet metal of the honeycomb or the density of the cells in the honeycomb it was well known in the art at the time of the invention that these variables have a direct relationship to the performance of the honeycomb (for example, more cells, thinner walls yields more surface area for catalyst, as implied by Cyron, col. 6 lines 42-58). As such, these dimensions are not considered to confer patentability to the claim. These variables would have been considered a result effective variable by one having ordinary skill in the art at the time the invention was made. As such, without showing unexpected results, the claimed size of the sheet metal and density of the cells cannot be

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considered critical. Accordingly, one of ordinary skill in the art at the time the invention was made would have optimized, by routine experimentation, the size and density of the cells to obtain the desired performance (In re Boesch, 617 F. 2d. 272,205 USPQ 215 (CCPA 1980)). Since it has been held that where general conditions of the claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art (In re Aller, 105 USPQ 223).

6. Claim 7 is rejected under 35 U.S.C. 102(b) as being anticipated by Maus et al. (US 5,916,530).

Regarding claim 7, Maus discloses A honeycomb body, comprising:

a housing (1, Fig. 3);

a matrix (2) having an average initial diameter and connected to said housing (see Fig. 3); and

at least one contraction limiter (11) configured for imparting an outwardly directed tensile stress in at least one part of said matrix for preventing the average initial diameter of said matrix from decreasing by more than 5% during and/or after a thermal stress (thermal stress is directed toward a method of operating said matrix);

said matrix (2) and said housing (1) define an annular gap therebetween (see Fig. 3) and surrounding said matrix, and said at least one contraction limiter (11) sealing said annular gap surrounding said matrix (see Fig. 3 and col. 5 lines 9-12).

Response to Arguments

7. Applicant's arguments regarding claim 7 which state (on page 14) that Ota does not teach a contraction limiter which seals the gap between the matrix and the housing is persuasive.

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Therefore the rejection(s) of claim(s) 7 under 35 USC §103(a) has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Maus et al. (US 5,916,530).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MATTHEW J. MERKLING whose telephone number is (571)272-9813. The examiner can normally be reached on M-F 8:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexa Neckel can be reached on (571) 272-1446. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. J. M./

Examiner, Art Unit 1795

/Alexa D. Neckel/

Supervisory Patent Examiner, Art Unit 1795